

B Busse

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

95
papers

3,086
citations

32
h-index

52
g-index

108
ext. papers

3,757
ext. citations

5.9
avg, IF

5.03
L-index

#	Paper	IF	Citations
95	Influence of X-rays and gamma-rays on the mechanical performance of human bone factoring out intraindividual bone structure and composition indices.. <i>Materials Today Bio</i> , 2022 , 13, 100169	9.9	0
94	A finite element study on femoral locking compression plate design using genetic optimization method.. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022 , 131, 105202	4.1	0
93	The WNT1 mutation specifically affects skeletal integrity in a mouse model of osteogenesis imperfecta type XV. <i>Bone Research</i> , 2021 , 9, 48	13.3	2
92	Breaking new ground in mineralized tissue: Assessing tissue quality in clinical and laboratory studies. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021 , 113, 104138	4.1	3
91	High-Throughput Lossy-to-Lossless 3D Image Compression. <i>IEEE Transactions on Medical Imaging</i> , 2021 , 40, 607-620	11.7	7
90	Skeletal Biology and Disease Modeling in Zebrafish. <i>Journal of Bone and Mineral Research</i> , 2021 , 36, 436-458	4.5	12
89	Response of the ENPP1-Deficient Skeletal Phenotype to Oral Phosphate Supplementation and/or Enzyme Replacement Therapy: Comparative Studies in Humans and Mice. <i>Journal of Bone and Mineral Research</i> , 2021 , 36, 942-955	6.3	2
88	Loss of glucocorticoid rhythm induces an osteoporotic phenotype in female mice. <i>Aging Cell</i> , 2021 , 20, e13474	9.9	3
87	Collagen Fiber Orientation Is Coupled with Specific Nano-Compositional Patterns in and Osteons Modulating Their Biomechanical Properties. <i>ACS Nano</i> , 2021 , 15, 455-467	16.7	8
86	Fgfr3 Is a Positive Regulator of Osteoblast Expansion and Differentiation During Zebrafish Skull Vault Development. <i>Journal of Bone and Mineral Research</i> , 2020 , 35, 1782-1797	6.3	6
85	Crtap and p3h1 knock out zebrafish support defective collagen chaperoning as the cause of their osteogenesis imperfecta phenotype. <i>Matrix Biology</i> , 2020 , 90, 40-60	11.4	14
84	A Clinical Perspective on Advanced Developments in Bone Biopsy Assessment in Rare Bone Disorders. <i>Frontiers in Endocrinology</i> , 2020 , 11, 399	5.7	3
83	Long-Term Immobilization in Elderly Females Causes a Specific Pattern of Cortical Bone and Osteocyte Deterioration Different From Postmenopausal Osteoporosis. <i>Journal of Bone and Mineral Research</i> , 2020 , 35, 1343-1351	6.3	21
82	Multiscale bone quality analysis in osteoarthritic knee joints reveal a role of the mechanosensory osteocyte network in osteophytes. <i>Scientific Reports</i> , 2020 , 10, 673	4.9	7
81	Human Heterozygous ENPP1 Deficiency Is Associated With Early Onset Osteoporosis, a Phenotype Recapitulated in a Mouse Model of Enpp1 Deficiency. <i>Journal of Bone and Mineral Research</i> , 2020 , 35, 528-539	6.3	18
80	Individuals with type 2 diabetes mellitus show dimorphic and heterogeneous patterns of loss in femoral bone quality. <i>Bone</i> , 2020 , 140, 115556	4.7	8
79	Recovery of bone mineralization and quality during asfotase alfa treatment in an adult patient with infantile-onset hypophosphatasia. <i>Bone</i> , 2019 , 127, 67-74	4.7	18

78	On the Origins of Fracture Toughness in Advanced Teleosts: How the Swordfish Sword Bone Structure and Composition Allow for Slashing under Water to Kill or Stun Prey. <i>Advanced Science</i> , 2019 , 6, 1900287	13.6	8
77	Mechanical Competence and Bone Quality Develop During Skeletal Growth. <i>Journal of Bone and Mineral Research</i> , 2019 , 34, 1461-1472	6.3	28
76	Inter-site Variability of the Human Osteocyte Lacunar Network: Implications for Bone Quality. <i>Current Osteoporosis Reports</i> , 2019 , 17, 105-115	5.4	14
75	Subregional areal bone mineral density (aBMD) is a better predictor of heterogeneity in trabecular microstructure of vertebrae in young and aged women than subregional trabecular bone score (TBS). <i>Bone</i> , 2019 , 122, 156-165	4.7	6
74	Bisphosphonate treatment changes regional distribution of trabecular microstructure in human lumbar vertebrae. <i>Bone</i> , 2019 , 127, 482-487	4.7	2
73	Increased mechanical loading through controlled swimming exercise induces bone formation and mineralization in adult zebrafish. <i>Scientific Reports</i> , 2018 , 8, 3646	4.9	49
72	Inter-site variability of the osteocyte lacunar network in the cortical bone underpins fracture susceptibility of the superolateral femoral neck. <i>Bone</i> , 2018 , 112, 187-193	4.7	8
71	Severely Impaired Bone Material Quality in Chihuahua Zebrafish Resembles Classical Dominant Human Osteogenesis Imperfecta. <i>Journal of Bone and Mineral Research</i> , 2018 , 33, 1489-1499	6.3	47
70	Early bone tissue aging in human auditory ossicles is accompanied by excessive hypermineralization, osteocyte death and micropetrosis. <i>Scientific Reports</i> , 2018 , 8, 1920	4.9	22
69	Bone tissue aging affects mineralization of cement lines. <i>Bone</i> , 2018 , 110, 187-193	4.7	31
68	Perturbed bone composition and integrity with disorganized osteoblast function in zinc receptor/Gpr39-deficient mice. <i>FASEB Journal</i> , 2018 , 32, 2507-2518	0.9	16
67	Differential effects of high-fat diet and exercise training on bone and energy metabolism. <i>Bone</i> , 2018 , 116, 120-134	4.7	24
66	Thy-1 (CD90) promotes bone formation and protects against obesity. <i>Science Translational Medicine</i> , 2018 , 10,	17.5	51
65	Impaired proteoglycan glycosylation, elevated TGF- β signaling, and abnormal osteoblast differentiation as the basis for bone fragility in a mouse model for gerodermia osteodysplastica. <i>PLoS Genetics</i> , 2018 , 14, e1007242	6	25
64	Physiological and pathological osteocytic osteolysis. <i>Journal of Musculoskeletal Neuronal Interactions</i> , 2018 , 18, 292-303	1.3	51
63	Ultra-high matrix mineralization of sperm whale auditory ossicles facilitates high sound pressure and high-frequency underwater hearing. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018 , 285, 20181820	4.4	9
62	Thy-1 Deficiency Augments Bone Loss in Obesity by Affecting Bone Formation and Resorption. <i>Frontiers in Cell and Developmental Biology</i> , 2018 , 6, 127	5.7	8
61	Conditional mouse models support the role of SLC39A14 (ZIP14) in Hyperostosis Cranialis Interna and in bone homeostasis. <i>PLoS Genetics</i> , 2018 , 14, e1007321	6	4

60	Comparison of Bone Microarchitecture Between Adult Osteogenesis Imperfecta and Early-Onset Osteoporosis. <i>Calcified Tissue International</i> , 2018 , 103, 512-521	3.9	21
59	Cobalt deposition in mineralized bone tissue after metal-on-metal hip resurfacing: Quantitative EX-ray-fluorescence analysis of implant material incorporation in periprosthetic tissue. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2017 , 105, 1855-1862	3.5	5
58	Assessment of collagen quality associated with non-enzymatic cross-links in human bone using Fourier-transform infrared imaging. <i>Bone</i> , 2017 , 97, 243-251	4.7	33
57	Association between regional heterogeneity in the mid-facial bone micro-architecture and increased fragility along Le Fort lines. <i>Dental Traumatology</i> , 2017 , 33, 300-306	4.5	1
56	Region-dependent patterns of trabecular bone growth in the human proximal femur: A study of 3D bone microarchitecture from early postnatal to late childhood period. <i>American Journal of Physical Anthropology</i> , 2017 , 164, 281-291	2.5	12
55	ETCP bone substitutes in tibial plateau depression fractures. <i>Knee</i> , 2017 , 24, 1138-1145	2.6	8
54	Calcium and vitamin-D deficiency marginally impairs fracture healing but aggravates posttraumatic bone loss in osteoporotic mice. <i>Scientific Reports</i> , 2017 , 7, 7223	4.9	23
53	Atypical fracture with long-term bisphosphonate therapy is associated with altered cortical composition and reduced fracture resistance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 8722-8727	11.5	94
52	Vertebral bone microarchitecture and osteocyte characteristics of three toothed whale species with varying diving behaviour. <i>Scientific Reports</i> , 2017 , 7, 1604	4.9	12
51	Vitamin D regulates osteocyte survival and perilacunar remodeling in human and murine bone. <i>Bone</i> , 2017 , 103, 78-87	4.7	46
50	The Formation of Calcified Nanospherites during Micropetrosis Represents a Unique Mineralization Mechanism in Aged Human Bone. <i>Small</i> , 2017 , 13, 1602215	11	37
49	The incorporation of fluoride and strontium in hydroxyapatite affects the composition, structure, and mechanical properties of human cortical bone. <i>Journal of Biomedical Materials Research - Part A</i> , 2017 , 105, 433-442	5.4	8
48	Intrinsic mechanical behavior of femoral cortical bone in young, osteoporotic and bisphosphonate-treated individuals in low- and high energy fracture conditions. <i>Scientific Reports</i> , 2016 , 6, 21072	4.9	44
47	Chronic skin inflammation leads to bone loss by IL-17-mediated inhibition of Wnt signaling in osteoblasts. <i>Science Translational Medicine</i> , 2016 , 8, 330ra37	17.5	96
46	How the European eel (<i>Anguilla anguilla</i>) loses its skeletal framework across lifetime. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016 , 283,	4.4	10
45	Application of reference point indentation for micro-mechanical surface characterization of calcium silicate based dental materials. <i>Biomedical Microdevices</i> , 2016 , 18, 25	3.7	3
44	Eigenschaften des Osteozytennetzwerks in gesundem und erkranktem Knochen. <i>Osteologie</i> , 2016 , 25, 69-76	0.2	2
43	The assessment of adipocere to estimate the post-mortem interval - a skeleton from the tidelands. <i>Anthropologischer Anzeiger</i> , 2016 , 73, 235-47	0.6	3

42	Osteoblast-specific Notch2 inactivation causes increased trabecular bone mass at specific sites of the appendicular skeleton. <i>Bone</i> , 2016 , 87, 136-46	4.7	27
41	Microstructure and wettability of root canal dentine and root canal filling materials after different chemical irrigation. <i>Applied Surface Science</i> , 2015 , 355, 369-378	6.7	4
40	Bone microarchitecture at muscle attachment sites: The relationship between macroscopic scores of entheses and their cortical and trabecular microstructural design. <i>American Journal of Physical Anthropology</i> , 2015 , 157, 81-93	2.5	18
39	Age- and Sex-Specific Bone Structure Patterns Portend Bone Fragility in Radii and Tibiae in Relation to Osteodensitometry: A High-Resolution Peripheral Quantitative Computed Tomography Study in 385 Individuals. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2015 , 70, 1269-75	6.4	37
38	Alendronate treatment alters bone tissues at multiple structural levels in healthy canine cortical bone. <i>Bone</i> , 2015 , 81, 352-363	4.7	45
37	Addition of a Fluoride-containing Radiopacifier Improves Micromechanical and Biological Characteristics of Modified Calcium Silicate Cements. <i>Journal of Endodontics</i> , 2015 , 41, 2050-7	4.7	12
36	Impaired bone remodeling and its correction by combination therapy in a mouse model of mucopolysaccharidosis-I. <i>Human Molecular Genetics</i> , 2015 , 24, 7075-86	5.6	15
35	The fracture mechanics of human bone: influence of disease and treatment. <i>BoneKEy Reports</i> , 2015 , 4, 743		85
34	Modifications to nano- and microstructural quality and the effects on mechanical integrity in Paget's disease of bone. <i>Journal of Bone and Mineral Research</i> , 2015 , 30, 264-73	6.3	40
33	Effect of micromorphology of cortical bone tissue on crack propagation under dynamic loading. <i>EPJ Web of Conferences</i> , 2015 , 94, 03005	0.3	2
32	Multi-level characterization of human femoral cortices and their underlying osteocyte network reveal trends in quality of young, aged, osteoporotic and antiresorptive-treated bone. <i>Biomaterials</i> , 2015 , 45, 46-55	15.6	64
31	Fracture resistance of human cortical bone across multiple length-scales at physiological strain rates. <i>Biomaterials</i> , 2014 , 35, 5472-81	15.6	100
30	High fluoride and low calcium levels in drinking water is associated with low bone mass, reduced bone quality and fragility fractures in sheep. <i>Osteoporosis International</i> , 2014 , 25, 1891-903	5.3	25
29	Altered lacunar and vascular porosity in osteogenesis imperfecta mouse bone as revealed by synchrotron tomography contributes to bone fragility. <i>Bone</i> , 2014 , 61, 116-24	4.7	54
28	Trends in trabecular architecture and bone mineral density distribution in 152 individuals aged 30-90 years. <i>Bone</i> , 2014 , 66, 31-8	4.7	51
27	Bisphosphonate-osteoclasts: changes in osteoclast morphology and function induced by antiresorptive nitrogen-containing bisphosphonate treatment in osteoporosis patients. <i>Bone</i> , 2014 , 59, 37-43	4.7	80
26	Microstructural properties of the mid-facial bones in relation to the distribution of occlusal loading. <i>Bone</i> , 2014 , 68, 108-14	4.7	8
25	How tough is brittle bone? Investigating osteogenesis imperfecta in mouse bone. <i>Journal of Bone and Mineral Research</i> , 2014 , 29, 1392-1401	6.3	100

24	Nano-structural, compositional and micro-architectural signs of cortical bone fragility at the superolateral femoral neck in elderly hip fracture patients vs. healthy aged controls. <i>Experimental Gerontology</i> , 2014 , 55, 19-28	4.5	46
23	Effects of long-term alendronate treatment on bone mineralisation, resorption parameters and biomechanics of single human vertebral trabeculae. <i>European Cells and Materials</i> , 2014 , 28, 152-63; discussion 163-5	4.3	14
22	Osteocytic canalicular networks: morphological implications for altered mechanosensitivity. <i>ACS Nano</i> , 2013 , 7, 7542-51	16.7	100
21	Micro-morphological properties of osteons reveal changes in cortical bone stability during aging, osteoporosis, and bisphosphonate treatment in women. <i>Osteoporosis International</i> , 2013 , 24, 2671-80	5.3	59
20	Impaired bone mineralization accompanied by low vitamin D and secondary hyperparathyroidism in patients with femoral neck fracture. <i>Osteoporosis International</i> , 2013 , 24, 641-9	5.3	24
19	Scaling of Haversian canal surface area to secondary osteon bone volume in ribs and limb bones. <i>American Journal of Physical Anthropology</i> , 2013 , 151, 230-44	2.5	30
18	3D micron-scale imaging of the cortical bone canal network in human osteogenesis imperfecta (OI) 2013 ,		6
17	Vitamin D deficiency induces early signs of aging in human bone, increasing the risk of fracture. <i>Science Translational Medicine</i> , 2013 , 5, 193ra88	17.5	114
16	Divergent resorbability and effects on osteoclast formation of commonly used bone substitutes in a human in vitro-assay. <i>PLoS ONE</i> , 2012 , 7, e46757	3.7	19
15	Accelerated growth plate mineralization and foreshortened proximal limb bones in fetuin-A knockout mice. <i>PLoS ONE</i> , 2012 , 7, e47338	3.7	43
14	Analysis of retrieved hip resurfacing arthroplasties reveals the interrelationship between interface hyperosteoidosis and demineralization of viable bone trabeculae. <i>Journal of Orthopaedic Research</i> , 2012 , 30, 1155-61	3.8	11
13	Correction for Zimmermann et al., Age-related changes in the plasticity and toughness of human cortical bone at multiple length scales. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 11890-11890	11.5	3
12	Changes to the cell, tissue and architecture levels in cranial suture synostosis reveal a problem of timing in bone development. <i>European Cells and Materials</i> , 2012 , 24, 441-58	4.3	15
11	Trabecular reorganization in consecutive iliac crest biopsies when switching from bisphosphonate to strontium ranelate treatment. <i>PLoS ONE</i> , 2011 , 6, e23638	3.7	11
10	Skeletal mineralization defects in adult hypophosphatasia—a clinical and histological analysis. <i>Osteoporosis International</i> , 2011 , 22, 2667-75	5.3	52
9	Age-related changes in the plasticity and toughness of human cortical bone at multiple length scales. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 14416-21	11.5	265
8	Decrease in the osteocyte lacunar density accompanied by hypermineralized lacunar occlusion reveals failure and delay of remodeling in aged human bone. <i>Aging Cell</i> , 2010 , 9, 1065-75	9.9	185
7	Negative regulation of bone formation by the transmembrane Wnt antagonist Kremen-2. <i>PLoS ONE</i> , 2010 , 5, e10309	3.7	47

6	Synchrotron-microcomputed tomography studies of normal and pathological cranial sutures: further insight. <i>Journal of Neurosurgery: Pediatrics</i> , 2010 , 5, 238-42	2.1	7
5	Reorganization of the femoral cortex due to age-, sex-, and endoprosthesis-related effects emphasized by osteonal dimensions and remodeling. <i>Journal of Biomedical Materials Research - Part A</i> , 2010 , 92, 1440-51	5.4	17
4	High bone turnover and accumulation of osteoid in patients with neurofibromatosis 1. <i>Osteoporosis International</i> , 2010 , 21, 119-27	5.3	54
3	Effects of strontium ranelate administration on bisphosphonate-altered hydroxyapatite: Matrix incorporation of strontium is accompanied by changes in mineralization and microstructure. <i>Acta Biomaterialia</i> , 2010 , 6, 4513-21	10.8	50
2	Increased calcium content and inhomogeneity of mineralization render bone toughness in osteoporosis: mineralization, morphology and biomechanics of human single trabeculae. <i>Bone</i> , 2009 , 45, 1034-43	4.7	128
1	Allocation of nonbirefringent wear debris: darkfield illumination associated with PIXE microanalysis reveals cobalt deposition in mineralized bone matrix adjacent to CoCr implants. <i>Journal of Biomedical Materials Research - Part A</i> , 2008 , 87, 536-45	5.4	18